

ORIGINAL

• PAUL. WEISS, RIFKIND, WHARTON & GARRISON
1615 L STREET, NW WASHINGTON, DC 20036-5694
TELEPHONE (202) 223-7300
FACSIMILE (202) 223-7420

1285 AVENUE OF THE AMERICAS
NEW YORK, NY 10019-6064

199, BOULEVARD SAINT-GERMAIN
75007 PARIS, FRANCE

AKASAKA TWIN TOWER
17-22, AKASAKA 2-CHOME
MINATO-KU, TOKYO 107, JAPAN

SUITE 1910 SCITE TOWER
22 JIANGUOMENWAI DAJIE
BEIJING, 100004
PEOPLE'S REPUBLIC OF CHINA

13TH FLOOR, HONG KONG CLUB BUILDING
3A CHATER ROAD CENTRAL, HONG KONG

RECEIVED
EX PARTE OR LATE FILED
NOV 10 1999
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

JEFFREY H. OLSON
COMMUNICATIONS COUNSEL
(202) 223-7326

November 10, 1999

Via Hand Delivery

Magalie Roman Salas, Secretary
Federal Communications Commission
445 12th St., S.W., Room TW-B204
Washington, D.C. 20554

**Re: Written *Ex Parte* Communication in ET Docket Nos. 98-206,
RM-9147, and RM-9245**

Dear Ms. Salas:

This letter is submitted in response to various *ex parte* communications submitted by Northpoint Technology, Ltd. ("Northpoint") in the above-referenced docket, primarily one filed on September 9, 1999. In its filing, Northpoint urges the Commission to amend its rules to permit the Northpoint system to enter the 12.2-12.7 GHz band (the "12 GHz band"), and to require nongeostationary ("NGSO") Fixed Satellite Service ("FSS") systems in the band to accommodate and protect its proposed services.^{1/}

As Northpoint admits, however, the Northpoint system cannot operate co-frequency with primary NGSO FSS systems without causing interference to such systems. Therefore, insisting that its terrestrial system has greater benefits to the public than NGSO FSS systems, Northpoint proposes that the Commission require NGSO FSS systems to avoid use of the 12.2-12.7 GHz band around all Northpoint transmitters, by using what Northpoint terms "Alternate Beam Assignment" ("ABA"), to permit the introduction of the Northpoint system. Moreover, Northpoint asserts that the resulting loss of half of the NGSO FSS service link band in such regions throughout the U.S. would have no adverse consequences for NGSO FSS systems. These assertions are technically incorrect, and demonstrate a complete lack of understanding by Northpoint regarding fundamental aspects of NGSO system

^{1/} On January 8, 1999, Northpoint affiliates filed 69 applications for Northpoint services (the "Broadwave Applications").

Magalie Roman-Salas, Secretary
November 10, 1999

2

architecture, capacity and cost. As is demonstrated below, Northpoint operations in the 12 GHz band would be flatly inconsistent with the Commission's statutory objective of making advanced telecommunications services available to all Americans.

I. Northpoint's proposed services and technology have no place in the 12 GHz band.

Northpoint originally promised to supplement DBS service with local channels, in cooperation with DBS providers. That plan has long since been discarded.^{2/} DBS operators have rejected Northpoint (on the basis of significant and documented technical concerns), opting instead to provide local channels by means that do not threaten, as Northpoint does, interference to their systems. As a result, Northpoint will not be able to provide local-into-local service that is truly integrated with DBS service, which eliminates Northpoint's initial rationale for operating in the 12 GHz band.^{3/}

Moreover, local channels could be provided using only a small fraction (10-20 MHz at most, assuming conservative compression technology) of the 500 MHz requested by Northpoint. And Northpoint's proposed use for the bulk of the spectrum -- non-local programming and data services -- is not novel. The Northpoint service (including any local TV channels) could readily be provided via the Local Multipoint Distribution Service ("LMDS"), the Digital Electronic Message Service ("DEMS"), or the Multichannel Multipoint Distribution Service ("MMDS"), and -- as opposed to the one-way-only capability offered at 12 GHz -- the 2.5, 24, 28, or 38 GHz bands

^{2/} See, e.g., Comments of SkyBridge, ET Docket No. 98-206, RM-9147, RM-9245, March 2, 1999 ("SkyBridge Comments"), at 109-116; Reply Comments of SkyBridge, ET Docket No. 98-206, RM-9147, RM-9245, April 14, 1999 ("SkyBridge Reply Comments") at 90-112.

^{3/} As SkyBridge explained in its Reply Comments in this proceeding, due to the often proprietary encoding, transmission, program guide and system information protocols employed by DBS operators, it is not clear how, absent DBS cooperation, Northpoint could insert local channels seamlessly into DBS services. See SkyBridge Reply Comments at 93-96. Indeed, in apparent recognition of these concerns, Northpoint's Petition for Rulemaking proposed that only DBS *affiliates* be licensed for Northpoint type services. Petition for Rulemaking to Modify Section 101.147(p) of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Digital Broadcast Satellite Licensees and Their Affiliates, RM-9245, March 6, 1998, Attachment A. However, none of the parties filing the Broadwave Applications appear to have any affiliation with any DBS provider.

Magalie Roman-Salas, Secretary
November 10, 1999

3

offer Northpoint two-way capability.^{4/} There is no technical or economic reason why Northpoint should provide such services in the 12 GHz band.^{5/} Indeed, Northpoint has admitted that its system could be deployed in a variety of available bands, specifically including the 28 GHz LMDS band.^{6/}

II. Northpoint's proposal does nothing to address the critical need for advanced telecommunications services in non-urban environments.

Northpoint claims in its *ex parte* filings that its system will better serve the public than NGSO FSS systems such as SkyBridge, ignoring completely the fact that its system will serve only discrete, relatively densely-populated areas, *i.e.*, television markets, including the very largest. NGSO FSS systems, on the other hand, are designed to serve every corner of the United States with critical advanced telecommunications services. Indeed, low earth orbit ("LEO") systems such as

^{4/} As Northpoint acknowledges at its website, rudimentary two-way services can be provided under its current 12 GHz proposal only if the telephone network (wireless or wireline) or some other non-12 GHz spectrum is employed. See http://www.northpointtechnology.com/html/interactive_services.html.

^{5/} See, e.g., NPRM Reply Comments at 91-96. Because Northpoint will need to provide a downconverter separate from that used by the DBS service provider (to avoid degrading the DBS signal), Northpoint can downconvert from other frequencies just as easily as it can downconvert from the 12.2-12.7 GHz band. See id. at 95-96. Moreover, it is simply not the case that equipment is not available at attractive pricing in the appropriate bands for the Northpoint service. For example, equipment to operate "wireless cable" services in the 2.5 GHz MMDS band has been readily available at reasonable prices for a decade or more, and that band provides up to 186 MHz (with better tree and terrain penetration characteristics than the 12 GHz band), which should be more than adequate for Northpoint's proposed services. Similarly, as companies such as Teligent, WinStar and the multitude of LMDS operators continue to roll out new services, equipment costs for 24, 28 and 38 GHz services will plummet. Even the most cursory examination of the development of the DBS and cellular/PCS equipment markets demonstrates that fact.

^{6/} See http://www.northpointtechnology.com/html/spectrum_planning.html. ("Northpoint should be considered in all frequencies where operators are making a transition from analog to digital or where frequencies are being reallocated. . . . In the instance of the 28-GHz band, it is still possible for Northpoint Technology to be adopted since many of the systems have not yet been built")

Magalie Roman-Salas, Secretary
November 10, 1999

4

SkyBridge are best suited to bridge the "digital divide" that separates rural America from the urban areas sought to be served by Northpoint.^{7/}

Neither Northpoint nor any other terrestrial broadband alternative will soon reach rural Americans due to technical limitations and basic economics. LEO systems such as SkyBridge represent the only likely means of delivering truly interactive broadband to all Americans. Such systems can serve the most remote household or business with the ease that they serve a city. They can connect users who have no hope of any other high-speed, two-way terrestrial connection, including Northpoint. The inability to serve rural areas is the critical constraint in providing universal access to advanced telecommunications services today. Northpoint's service does nothing whatsoever to address this need.^{8/}

III. Northpoint's proposals would result in a significant loss of NGSO service capacity throughout the United States.

Northpoint is simply wrong when it states in its *ex parte* filings that its ABA proposal would result in "no loss in NGSO service capacity." Northpoint is asking NGSO FSS systems to forgo using frequencies in the 12.2-12.7 GHz band -- half of

^{7/} See, e.g., Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, FCC 99-5, (rel. February 2, 1999) at 28, nn.110-111. Moreover, Northpoint ignores the fact that the 12.2-12.7 GHz band can accommodate multiple, competing, NGSO FSS providers. This will ensure that a diversity of NGSO service offerings, and fair prices, are offered to consumers. Northpoint has never even suggested that it could or would share the band with competing terrestrial providers. Indeed, deployment of Northpoint's system in a market would preempt virtually all other conceivable terrestrial (and satellite) applications in the band.

^{8/} It is difficult, if not impossible, for terrestrial wireless systems to serve non-urban areas on an economically viable basis. Northpoint's technology is no different in this respect from, e.g., the 2.5 GHz MMDS systems of MCI and Sprint, the 24 GHz DEMS system of Teligent, or the 28/38 GHz LMDS systems of WinStar and others. All of these systems will skim the urban "cream" before venturing into rural America (if they ever do so at all) because of the basic economics of service low population density areas.

On the other hand, starting in 2002, SkyBridge will begin providing high-speed, fully-interactive, broadband service to every corner of America via its 80-satellite LEO system, with monthly charges for the average residential user of approximately \$35.00 per month for 20 Mbps service.

Magalie Roman-Salas, Secretary
November 10, 1999

5

the spectrum available for NGSO FSS downlinks to customer user terminals -- whenever there is an interference configuration between a Northpoint transmitter and surrounding NGSO FSS earth stations. As detailed below, the impact on NGSO FSS systems would be devastating.

A. Northpoint transmitters will interfere with NGSO FSS user terminals.

The fundamental problem with co-frequency sharing between the Northpoint system and downlinks to NGSO FSS user terminals is that *interference to NGSO FSS earth stations in the area surrounding each Northpoint transmitter is inevitable*. Because the service area of each Northpoint transmitter is small, numerous transmitters will be required to serve each Northpoint market, and Northpoint proposes to serve all U.S. television markets with such transmitter arrays. Therefore, areas in which frequency sharing is not possible will blanket the country. This scenario is unacceptable for ubiquitous services such as those the NGSO FSS applicants propose to provide. An NGSO FSS operator would be unable to provide services to any consumers within the vicinity of the Northpoint transmitter, unable to sell user terminals to any customer without initially conducting a survey of the customer's premises, and would lose existing customers every time Northpoint expands into a new community and erects is numerous transmitters.

The Commission and the ITU have both recognized on numerous occasions the intractable problems in sharing between high-density, point-to-multipoint terrestrial services and ubiquitous satellite earth stations.^{9/} As the

^{9/} See, e.g., Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, 11 FCC Rcd 19005 (1996); Amendment of the Commission's Rules to Relocate the Digital Electronic Message Service From the 18 GHz Band to the 24 GHz Band and to Allocate the 24 GHz Band for Fixed Service, 13 FCC Rcd 15147 (1998); Chapter 3 of the Draft Report of the Conference Preparatory Committee to WRC-2000, Section 3.1.4.3 ("[T]he high density deployment of both services . . . creates the most difficult sharing environment. In this instance, either one or both services may be excessively constrained or prevented from offering a viable service in the same geographic area.")

On the other hand, *non-ubiquitous* satellite earth stations can often operate co-
(continued...)

Magalie Roman-Salas, Secretary
November 10, 1999

6

Commission is well aware, SkyBridge itself has accepted such technical conclusions, even when this required forgoing use of certain bands for types of NGSO FSS operations.^{10/}

As SkyBridge has detailed in numerous proceedings, Northpoint's various filings with the Commission and submission in the ITU-related process specify an extraordinary range of power levels and other key parameters, thwarting all attempts at precise interference analysis.^{11/} In the absence of detailed deployment information for the Northpoint system, which to date Northpoint has failed to provide, SkyBridge has no option but to assume worst-case power levels and interference configurations, which, as demonstrated below, leads to devastating results.

^{9/}

(...continued)

frequency with terrestrial services. This requires individual coordinations to ensure that neither service receives interference. For example, coordination will permit sharing between terrestrial FS stations and NGSO FSS gateways in the 10.7-11.7 GHz band. However, coordination would not be practical between FS stations and ubiquitous NGSO FSS user stations, a situation that is closely analogous to the Northpoint proposal. It is simply not feasible to coordinate ubiquitous NGSO FSS user terminals with Northpoint's essentially ubiquitous transmitters. This is precisely the reason Northpoint proposes to evict NGSO FSS systems from the 12 GHz band in the vicinity of Northpoint transmitter operations.

^{10/}

It was for this reason that SkyBridge proposed to operate only non-ubiquitous gateways in the lower 10.7-11.7 GHz band, which is heavily used for FS operations. It is, in fact, this step to accommodate important FS operations in the 10.7-11.7 GHz band that now dictates that SkyBridge and other NGSO FSS operators deploy user terminals in the 11.7-12.7 GHz bands, including the subject 12.2-12.7 GHz band. This is feasible only because this band has long been cleared of FS operations. Northpoint's proposal threatens to reverse this situation.

^{11/}

As SkyBridge and others have documented repeatedly, Northpoint's filings with the Commission have been completely devoid of the information required for any party (whether NGSO FSS or DBS) to conduct a definitive interference analysis. See, e.g., SkyBridge Comments at 111-112; SkyBridge Reply Comments at 96-98. The same has been true in the international arena; all of Northpoint's submission to international study groups examining use of the 12.2-12.7 GHz band (e.g., the Toulouse and Long Beach meetings of the JTG 4-9-11) have been flatly rejected based on insufficient technical support.

Magalie Roman-Salas, Secretary
November 10, 1999

7

Northpoint misleadingly claims that SkyBridge user terminals would receive interference from Northpoint transmitters over "only" approximately 8% of the service area of each Northpoint transmitter. This figure was computed using what Northpoint asserts is its "typical" EIRP of 12.5 dBm. However, in Northpoint's comments to the Commission^{12/} and in the Broadwave Applications, much higher powers are proposed. The Applications specify a maximum power of 45 dBm, nearly 1800 times greater than the "typical" power used by Northpoint in its analysis.^{13/} If this value is assumed, *SkyBridge user terminals would receive interference over 100% of the Northpoint service area.*^{14/}

B. Northpoint's ABA proposal will not prevent loss of NGSO service capacity.

Northpoint argues that such interference can be prevented if NGSO systems implement its ABA proposal, and avoid using frequencies in the 12.2-12.7 GHz band when communicating with user terminals in the Northpoint exclusion zones. However, the fundamental technical assumptions underlying Northpoint's proposal are false.

First, even with ABA, the high powers used by Northpoint would require the implementation of high performance rejecting filters in each SkyBridge user terminal before down-conversion, to protect the user terminal against Northpoint interference. Without such filters, the noise factor of the SkyBridge user terminal will be dramatically increased, due to reciprocal mixing between the user terminal local oscillator and the interfering signals. Such complex filters are not feasible with the current size and target price of the SkyBridge terminals, and their inclusion would render the price of the terminals prohibitive to most end users.

^{12/} See, e.g., Northpoint Reply Comments, ET Docket No. 98-206, RM-9147, RM-9245, April 14, 1999 ("Northpoint Reply Comments"), Technical Annex at 2, n.2. ("The parameters in the "Range" column [indicating an EIRP range of 8.5 dBm to 22.5 dBm] are intended to provide guidance This is not to limit in any way the possibility of other values being used. . . . The allowable EIRP may be much higher. . . .")

^{13/} Broadwave Applications, Exhibit 2 at 2.

^{14/} Even Northpoint admits that its ABA proposal, discussed below, would not work in such a scenario. Northpoint Reply Comments at 30.

Magalie Roman-Salas, Secretary
November 10, 1999

8

Second, as SkyBridge has pointed out before,^{15/} to prevent self-interference among adjacent beams from the same NGSO satellite, the assigned spectrum often must be split among such beams. As a result, all or part of some of the cells served by such beams will have to use frequencies in the 12.2-12.7 GHz band *only*. This is an unavoidable consequence of geometrical and interference constraints.^{16/} In the presence of Northpoint interference, user terminals in such regions could not be served. Even assuming Northpoint's figure of 8% of user terminals affected in each Northpoint service area, this is unacceptable for a ubiquitous consumer service.

Third, multiple NGSO FSS systems will be sharing the band, and Northpoint's ABA proposal will place constraints on the assigning of frequencies to users. Put simply, allowing Northpoint to use half of the spectrum available to NGSO FSS systems for downlinks to user terminals, while requiring multiple NGSO FSS systems to coordinate use of only the remaining half, will decrease the number of NGSO systems that can be accommodated in the Ku-band and dramatically increase the cost per customer of such systems.

Thus, because Northpoint proposes to serve all U.S. television markets (in each case deploying a large array of transmitters), Northpoint service areas will exist within the footprint of every NGSO FSS beam serving the United States. Because of the frequency use constraints noted above, it appears that NGSO FSS systems would, as a practical matter, be precluded from using the 12.2-12.7 GHz band throughout the entire United States territory, even assuming Northpoint's "typical" parameters. *Such exclusion from half of the downlink frequencies available for communications to user terminals would cut the capacity of the affected NGSO FSS systems in half, which could result in a*

^{15/} SkyBridge Reply Comments at 25.

^{16/} This cannot be avoided by splitting the band to ensure that all beams have some frequencies outside the 12.2-12.7 GHz band. Due to the high power of the Northpoint transmissions, this would still require all user terminals to be equipped with the complex filters discussed above, simply because the Northpoint deployment and operational parameters would not be known in advance. *All* user terminals would need to be capable of isolating *at RF* the Northpoint signals by at least 60 to 100 dB. Gateway complexity would also be increased in order to identify and segregate the terminals that receive Northpoint interference from the terminals that do not.

Magalie Roman-Salas, Secretary
November 10, 1999

9

doubling of projected subscriber costs, assuming arguendo that a business case still could be made for such a severely constrained system.^{17/}

IV. Northpoint's proposals do not constitute a "sharing of the burdens" of co-frequency operations.

Northpoint claims that NGSO FSS systems will reduce Northpoint's service area, even if they implement Northpoint's ABA proposal and forgo co-frequency operation near Northpoint transmitters. Northpoint's assertion is based on its calculations of the interference that would be received by its user terminals from NGSO FSS satellites.

First, Northpoint's assertion of service area loss stem directly from its self-declared protection criteria for its system. Obviously, the greater protection it claims, the greater the impact of other co-frequency services to its service region. It must be understood that Northpoint can demonstrate any impact, and hence any "burden," it likes, simply by adjusting its protection criteria.

As has been pointed out in various ITU fora by numerous parties, the protection criteria specified by Northpoint for its system are wholly unsupported and greatly at odds with all other similar terrestrial services. Although Northpoint characterizes itself as just another FS operator,^{18/} it argues that it requires up to 10 dB more protection than the power flux density ("pfd") limits that have already been agreed by the JTG 4-9-11 (with strong U.S. support) to protect FS services in the

^{17/} Quantifying more precisely the extent of the problem for each proposed NGSO FSS system can only be achieved through the kind of rigorous technical review that has taken place to establish the ground rules for GSO/NGSO sharing. Unfortunately, Northpoint's efforts in such forums have been meager at best, precluding resolution of these issues. As noted above, all of Northpoint's submission to international study groups examining use of the 12.2-12.7 GHz band have been flatly rejected based on insufficient technical support. In judging Northpoint's proposals, the Commission cannot rely on Northpoint's undocumented assertions, but must require the same open technical scrutiny it has supported in the context of GSO/NGSO sharing in the same band.

^{18/} See, e.g., Comments of Northpoint Technology, Ltd., In the Matter of Satellite Applications Accepted for Filing in the 12.75-13.25 GHz, 13.75-14.5 GHz, 17.3-17.8 GHz, and 10.7-11.7 GHz Frequency Bands, Report No. SAT-00013, June 9, 1999 ("Northpoint Comments"), at 3.

Magalie Roman-Salas, Secretary
November 10, 1999

10

band.^{19/} These limits are the result of extensive study and debate among NGSO and FS operators worldwide. The burden must be placed on Northpoint to provide the technical details necessary to understand its purported sensitivity. Northpoint has not even attempted to meet this burden.

Northpoint goes on to propose that any burdens to its system could be eliminated by requiring NGSO FSS systems to operate at higher elevation angles, to protect its terrestrial operations from interference from NGSO FSS satellites. Assuming, *arguendo*, that such burdens on Northpoint exist, requiring NGSO FSS systems to increase their elevation angles is not a solution. Just as protecting the GSO arc places substantial capacity limitations on NGSO FSS systems, protecting Northpoint's fictitious "terrestrial" arc would place additional -- and in this case, unwarranted -- burdens on NGSO FSS systems.

As discussed in SkyBridge's Comments in this proceeding, to accommodate Northpoint's plan, a constellation redesign involving a substantial increase in the number of satellites of each NGSO system would be required, in order to increase the minimum elevation angle of the satellites while still providing global service.^{20/} Such a change would involve billions of dollars of increased construction and launch costs, with no demonstrated countervailing benefit. At best, protection would be afforded to the small minority of Northpoint receivers in the U.S. that happen to be situated in a worst-case configuration, and at worst, it would simply over-protect all Northpoint receivers according to Northpoint's inflated protection criteria.^{21/} There is no rational justification for either result, and a solid, fundamental public interest basis -- Section 706 -- for rejection of Northpoint's proposal.^{22/}

^{19/} Northpoint Comments, Technical Annex at 27.

^{20/} See SkyBridge Comments at 4, 6.

^{21/} As in the case of interference to NGSO FSS user terminals, quantifying the impact to Northpoint receivers from NGSO FSS satellite emissions can be accomplished only through rigorous open debate, taking into account detailed Northpoint implementation parameters. To date, Northpoint has thwarted such efforts. As a result, Northpoint has never provided adequate justification for its claimed protection requirements.

^{22/} Northpoint's suggestion that NGSO systems reconfigure their constellations is similar to its equally specious suggestion that NGSO systems move to entirely new bands, *e.g.*, the Ka-band. This, of course, would dramatically increase system cost and complexity, given the obvious differences between mature Ku-band technologies and untried Ka-band technologies, coupled with the

(continued...)

Magalie Roman-Salas, Secretary
November 10, 1999

11

* * *

In sum, although the 12.2-12.7 GHz band is just a portion of the Ku-band spectrum used by NGSO FSS systems, it is a critical piece of a complex puzzle that allows NGSO FSS systems to share spectrum with numerous existing Ku-band services, in each case without any undue burdens on such systems. Due to constraints already inherent in other portions of the band, NGSO FSS systems must have the unfettered ability to operate ubiquitous user terminals in this band. Northpoint's proposals to introduce a high density, point-to-multipoint system into the band are inconsistent with this requirement.

Put in its starkest terms, Northpoint's operation in the 12 GHz band would directly and significantly threaten the availability of affordable advanced telecommunications services in non-urban America. As noted above, LEO systems such as SkyBridge represent the only technology that can economically solve the rural broadband access problem. Only two such LEO systems are under development: SkyBridge and Teledesic. According to Teledesic's latest estimate, its broadband LEO system (operating at Ka-band) will not enter service until the 2004-2005 timeframe. Northpoint's insistence on operating in the same band as SkyBridge threatens to postpone indefinitely the day when American citizens who do not live in urban areas can enjoy real access to the information age.

No doubt there would be value in having Northpoint as an additional wireless competitor, and Northpoint is free today to acquire spectrum for its system in the 2.5 GHz, 24 GHz, 28 GHz and 38 GHz bands, all of which are allocated for precisely these type of services, just as a host of others have done. There is nothing that Northpoint can do at 12 GHz -- except interfere with (or even preclude) NGSO FSS and DBS services -- that it cannot do in these other bands. Indeed, given Northpoint's abandonment of its initial scheme to "piggyback" its service onto DBS services, there is no technical or marketing rationale whatsoever for Northpoint's continued insistence that it be permitted to operate at 12 GHz. If it would move to one of the other multitude of bands already allocated for its type of service, SkyBridge's (and, presumably, the DBS industry's) objections would vanish instantly.

^{22/}

(...continued)

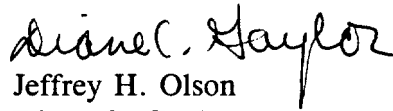
severely increased rain-fade and similar technical problems presented by Ka-band. As opposed to Northpoint, whose sole rationale for operating at 12 GHz ("piggybacking" on DBS) evaporated long ago, all the reasons that drive NGSO systems to Ku-band remain valid and ultimately result in dramatically reduced time-to-market and consumer costs for these critical satellite services. On the other hand, Northpoint could reach its market (whatever that may be) faster with a better (*i.e.*, two-way) service -- and at not significantly greater cost -- by moving to one of the several bands already allocated for its service.

Magalie Roman-Salas, Secretary
November 10, 1999

12

This would provide a win-win solution for both Northpoint and NGSO FSS systems. Northpoint could proceed expeditiously to enter whatever geographic and service markets its found economically attractive, free of entanglements with SkyBridge and the DBS industry. And one less obstacle would remain in the Commission's path toward delivering on the promise of Section 706: ensuring access to affordable advanced telecommunications services for all Americans.

Respectfully submitted,



Jeffrey H. Olson
Diane C. Gaylor
Attorneys for
SkyBridge LLC

cc: Dale Hatfield
Julius Knapp
Thomas Derenge
Don Abelson
Thomas Tycz
Thomas Sugrue
Thomas Stanley
Ari Fitzgerald
Peter Tenhula
Adam Krinsky
Mark Schneider
Bryan Tramont